CLAIMS

What is claimed is:

1. A method for characterizing a nucleic acid-protein interaction comprising:

(a) immobilizing a nucleic acid or a protein on a solid support;

(b) contacting the nucleic acid and the protein under conditions which allow the nucleic acid and the protein to interact; and

(c) measuring the strength of the nucleic acid-protein interaction.

2. The method of claim 1 further comprising repeating steps (a) through (c) one or more times.

3. The method of claim 2 wherein the nucleic acid, protein or both used in repeated steps (a) through (c) are different from the respective nucleic acid, protein or both used in the first iteration.

4. The method of claim 1 wherein the nucleic acid is selected from the group consisting of ss RNA, ds RNA, ss DNA, ds DNA and PNA.

5. The method of claim 1 wherein the solid support is a gel pad.

6. The method of claim 1 wherein the strength of the nucleic acid-protein interaction is measured through Tm or a change in Tm.

7. The method of claim 1 wherein the strength of the nucleic acid-protein interaction is measured through fluorescence or a change in fluorescence.

8. The method of claim 1 wherein the nucleic acid sequence is selected from the group consisting of a nucleic acid having a predetermined sequence and nucleic acid not having a predetermined sequence.

9. The method of claim 1 wherein the protein is selected from the group of proteins consisting of a predetermined protein and a protein which is not predetermined.

10. The method of claim 8 wherein the nucleic acid does not have a predetermined sequence further comprising determining the sequence of the nucleic acid.

11. The method of claim 9 wherein the protein is not predetermined further comprising determining the identity of the protein.

12. The method of claim 1 wherein the nucleic acid sequence is a nucleic acid encoding a functional nucleic acid sequence.

13. The method of claim 12 wherein the functional nucleic acid sequence is a promoter or gene.

14. The method of claim 1 wherein the protein modulates the activity or expression of a gene or gene product.

15. A kit for characterizing nucleic acid-protein interactions comprising instructions for carrying out the method of claim 1.

16. The kit of claim 15 further comprising one or more of a solid support, buffer, dyes or disposable lab equipment.

17. A method for characterizing a protein-protein interaction comprising:

(a) immobilizing a protein on a solid support;

(b) contacting the protein with a second protein under conditions which allow the proteins to interact; and

(c) measuring the strength of the protein-protein interaction.

18. The method of claim 17 further comprising repeating steps (a) through (c) one or more times.

19. The method of claim 18 wherein the protein, second protein or both used in repeated steps (a) through (c) are different from the respective protein, second protein or both used in the first iteration.

20. The method of claim 17 wherein the solid support is a gel pad.

21. The method of claim 17 wherein the strength of the protein-protein interaction is measured through fluorescence or a change in fluorescence.

22. A kit for characterizing protein-protein interactions comprising instructions for carrying out the method of claim 17.

23. The kit of claim 22 further comprising one or more of a solid support, buffer, dyes or disposable lab equipment.